

REMARKS

Claims 1-45, 48, 49, 50-53, 57, 60-66, 71, 72, 76, and 80 have been canceled without prejudice or disclaimer. Applicants reserve the right to file one or more continuation or divisional applications directed to the canceled subject matter. New claims 97-101 have been added. New claim 97 corresponds to canceled claim 50, new claim 98 corresponds to canceled claim 52, new claim 99 corresponds to canceled claim 62, new claim 100 corresponds to canceled claim 64, and new claim 101 corresponds to canceled claim 66. No new matter has been added or new issues raised. Claims 46, 47, 54-56, 58, 59, 67-70, 73-75, 77, 78, 79, 81-101 are presently pending. An appendix of pending claims is attached to this amendment.

The rejection of claims 1-9, 15, 20, 22-30, 36, 40, 43, 51, 57, 63, 65, 78, 89, and 91, as it now pertains to pending claims 46, 47, 54, 55, 56, 58, 59, 67-70, 73, 74, 75, 77, 78, 79, 81-101 is respectfully traversed. This application is a divisional of the parent application which is now United States Patent 6,267,953. It is a result of a restriction requirement that included an election of species. The pending claims are drawn to non-elected species which were not examined even after the elected species was found allowable. Furthermore, the enforceable life of this patent will not necessarily extend beyond the enforceable life of its parent since the pendency is calculated based on the filing date of the parent. Withdrawal of the instant rejection is respectfully requested.

The objection to claim 43 is respectfully traversed. Claim 43 has been canceled. Withdrawal of the instant objection is requested.

The rejection of claims 1-9, 15, 20, 22-30, 36, 40, and 43-

96, as it now pertains to pending claims 46, 47, 54, 55, 56, 58, 59, 67-70, 74, 73, 75, 77, 78, 79, 81-101, under 35 U.S.C. 112, first paragraph is respectfully traversed.

The claims were rejected because the compounds and mixtures found to be attracting, attracted *Aedes aegypti*, *Aedes albopictus*, and *Anopheles albimanus* which does not reasonably provide enablement for all compounds or mixtures of compounds with respect to all arthropods, or even all mosquitos according to the Office. The Office further states that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The examples given by the office as support include that lactic acid as a known repellant to tsetse flies and the Office cites various references as evidence that different species of mosquitos are effected differently. The Office then states that with respect to *Aedes aegypti*, altering the base structure of lactic acid has varying effects of the attractancy and/or repellancy of lactic acid derivative to *A. aegypti* and cites two references as evidence. The Office concludes that in light of the above, it appears that a skilled artisan would be required to do undue experimentation in order to make and/or use the invention commensurate in scope with the claims.

Applicants submit that one of ordinary skill in the art would not be required to do undue experimentation given the teachings of the present application. Furthermore, none of the presently pending claims are drawn solely to the use of lactic acid or derivatives of lactic acid. No evidence has been provided by the Office for the claims pending at the time of rejection that are mixtures of compounds, some of which do not

include lactic acid. Pending claims 54, 55, 81, and 82 are composition claims that do not recite lactic acid. Method claims 67, 68, 69, 93, 94, and 95 do not recite lactic acid. The remaining composition and method claims that recite lactic acid as an ingredient also include other compounds. Furthermore, all the claims recite mosquito attracting amounts. Given the teachings of the present invention, and the scope of the presently pending claims, all of which were pending at the time of rejection, one of ordinary skill in the art could readily determine attractancy of the compositions and methods. Any claimed composition which fails to attract is not within the scope of the claims. That would be clear to one of ordinary skill in the art. Furthermore, enablement is not precluded even if some experimentation is necessary provided it is not unduly extensive (Hybritech, Inc., V. Monoclonal Antibodies, Inc. (CAFC 1986, 231 USPQ81; In re Borkowski and Van Venrooy (CCPA 1970), 164 USPQ 642). One of ordinary skill in the art would not require undue experimentation because the present specification clearly teaches how to make and use the compositions and methods encompassed by the claims. Withdrawal of the rejection is respectfully requested.

The rejection of claims 20 and 40 under 35 USC 112, second paragraph for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention is respectfully traversed. Claims 20 and 40 are no longer pending. Withdrawal of the instant rejection is respectfully requested.

The rejection of claims 1-9, 15, 20, 43-45, 49, 51, 71, 72, 76, and 78, as it now applies to claim 78 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over, Granata et al. is respectfully traversed.

The Office states that Granata et al. disclose a product comprising lactic acid, acetone, 2-butanone, 2,3-pentanedione, 2-heptanone, 3-hydroxy-2-butanone, diacetyl, acetaldehyde, ethanol, hexanol, trichloromethane, 2-ethyl furan, benzene and dimethyl disulfide which falls within the scope of the claims. The Office refers to page 333-35 as evidence. If not anticipated, the Office states that at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103 because the prior art discloses products that contain the same exact ingredients/components as that of the claimed invention and refers to *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980) to support the rejection.

Applicants respectfully submit that the instantly claimed invention is neither anticipated or rendered obvious by Granata et al. The Federal Circuit states that the anticipation determination is viewed from one of ordinary skill in the art and that there must be no difference between the claimed invention and the reference disclosure as viewed by a person of ordinary skill in the field of the invention, *Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F. 2d 1565, 18 USPQ2d 1001, 1010, (Fed. Cir. 1991). The instantly claimed invention requires that the composition be in an amount effective to attract mosquitos. The Granata reference is silent to mosquito attracting amounts for any of the disclosed compositions. Nor does the reference teach how to make and use the disclosed composition to attract mosquitos. It is therefore not enabling to one of ordinary skill in the mosquito attracting art. Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. It is not enough, however, that the reference disclose all the

claimed elements in isolation. Furthermore, note that the reference teaches that dimethyl disulfide is not always present in their disclosed composition. In fact in the two disclosed preferred compositions, 0.25% CAS and 0.1% CASHY (TABLE 8) dimethyl disulfide was not detectable in the 0.1% composition and in the other it was detectable. Therefore, one of ordinary skill in the art would conclude that dimethyl disulfide is not a required ingredient for the disclosed composition of the reference.

With respect to the 103(a) portion of the rejection, Granata is nonanalogous art and its use is improper. Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventors endeavor, whether the reference still is reasonably pertinent to the particular problem. See *In re Clay*, 23 USPQ2d 1058 (CAFC 1992). In the instant rejection, Granata is not from the same field of endeavor, attracting mosquitoes nor is Granata reasonably pertinent to the particular problem-attracting mosquitos. The Granata reference is directed to improving the flavor, acid, and volatile compound production in a high protein and fiber soyamilk yogurt-like product. No where does the reference teach that the disclosed compositions are in mosquito attracting amounts or how to make mosquito attracting compositions. No guidance is provided to one of ordinary skill in the mosquito attracting art nor does the reference provide a reasonable expectation of success of making a mosquito attracting composition from the disclosed yogurts. Therefore, the reference fails to anticipate and fails to render the instantly claimed invention *prima facie* obvious. Withdrawal of the instant

invention is respectfully requested.

The rejection of claims 1-9, 15, 19, 21, and 42 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Laye et al. is respectfully traversed. Claims 1-9, 15, 19, 21, and 42 have been canceled and none of the pending claims are of similar scope. Therefore, withdrawal of the instant rejection is respectfully requested.

The rejection of claims 1-9, 15, 19, 20, 22-30, 36, 40, 43, 49, 57, 60, 61, 63, 65, 73, 86, 89, and 91, as it now pertains to pending claims 73, 86, 89, and 91, under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over WO98/26661 is respectfully traversed.

The Office states that WO 98/26661 expressly discloses compositions comprising lactic acid and limburger cheese for attracting arthropods, including mosquitos falling within the scope of applicants claims and refers to pages 13, 14 and 19 for evidence. It further states that Limburger cheese contains phenylacetaldehyde, acetone, 2,3-butanedione, 2-pentanone, 2-hexanone, 2-heptanone, dimethyl disulfide, dimethyl trisulfide. The Office goes on to state that at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103 because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention and refers to *In re May* and *Ex parte Novitski* to support the rejection.

Claims 1, 9, 15, 19, 20, 22-30, 36, 40, 43, 49, 57, 60, 61, 63, 65, and 73 have been canceled. Claims 73, 86, 89, and 91 are drawn to a composition and methods of attracting mosquitos using compositions consisting essentially of lactic acid and 2-pentanone, lactic acid and acetone, or lactic acid and dimethyl

disulfide, respectively. The reference teaches lactic acid and Limburger Cheese. There is nothing in the reference which teaches the components of limburger cheese nor has one been provided by the Office. Furthermore, the additional ingredients of the limburger cheese would materially affect the instantly claimed invention and would therefore not anticipate the claims. The rejection is improper and withdrawal of the rejection is respectfully requested.

With respect to the 35 USC 103(a) portion of the rejection, WO98/26661 merely discloses the combination of lactic acid and limburger cheese. No other reference has been provided which identifies the compounds which make up limburger cheese, nor has any of the specific compounds been identified as attractants for mosquitos. Limburger Cheese contains many compounds and the reference fails to provide guidance to one of ordinary skill in the art as to which compounds can be combined with lactic acid in a composition for attracting mosquitos.

The Office is using the improper standard of improper hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. In re Fritch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1994). The rejection is improper.. Withdrawal of the instant rejection is respectfully requested.


In view of the above amendments and remarks, it is believed that all of the claims are in condition for allowance. Accordingly, it is respectfully requested that the instant application be allowed to issue. If any issues remain to be

resolved, the Examiner is invited to telephone the undersigned at the number below.

In the event this paper is deemed not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for such extension may be charged to Deposit Account 50-2134, along with any additional fees which may be required with respect to this paper.

Respectfully Submitted,

May 7, 2002
DATE



Gail E. Poulos, Patent Advisor
Registration No. 36,327
USDA-ARS-OTT
5601 Sunnyside Avenue, Rm. 4-1184
Beltsville, Maryland 20705-5131
Telephone: (301)504-5302

cc:

R. Brenner
M. Silverstein
U. Bernier
B. Clary

CERTIFICATE OF FILING VIA FACSIMILE

The undersigned hereby certifies that the attached Amendment with Marked up Version to Show Changes Made and Petition for Extension of Time (2 months) were this day, May 7, 2002, filed in the United States Patent and Trademark Office via facsimile to facsimile number 703-872-9306. Total Pages: 18


Gail E. Poulos

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-45, 48, 49, 50-53, 57, 60-66, 71, 72, 76, and 80 are canceled.

New claims 97-101 are added.

APPENDIX OF PENDING CLAIMS

46. A composition comprising mosquito attracting amounts of lactic acid and 2-pentanone.
47. A composition comprising mosquito attracting amounts of lactic acid and carbon disulfide..
54. A composition comprising mosquito attracting amounts of glycolic acid and acetone.
55. A composition comprising mosquito attracting amounts of glycolic acid and carbon dioxide.
56. The composition of claim 55 further comprising lactic acid.
58. A method for attracting mosquitos comprising exposing an environmetn with a composition comprising mosquito attracting amounts of lactic acid and butanone.
59. The method of claim 58 wherein the composition further comprises dimethyl disulfide.

67. A method for attracting mosquitos comprising exposing an environment with a composition comprising mosquito attracting amounts of pyruvic acid and acetone.
68. A method for attracting mosquitos comprising exposing an environment with a composition comprising mosquito attracting amounts of glycolic acid and acetone.
69. A method for attracting mosquitos comprising exposing an environment with a composition comprising mosquito attracting amounts of glycolic acid and carbon dioxide.
70. A composition consisting essentially of mosquito attracting amounts of lactic acid and butanone.
73. A composition consisting essentially of mosquito attracting amounts of lactic acid and 2-pentanone.
74. A composition consisting essentially of mosquito attracting amounts of lactic acid and carbon disulfide.
75. A composition consisting essentially of mosquito attracting amounts of lactic acid, carbon disulfide, and carbon dioxide.

77. A composition consisting essentially of mosquito attracting amounts of lactic acid, acetone, and carbon dioxide.

78. A composition consisting essentially of mosquito attracting amounts of lactic acid and dimethyl disulfide.

79. A composition consisting essentially of mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.

81. A composition consisting essentially of mosquito attracting amounts of glycolic acid and acetone.

82. A composition consisting essentially of mosquito attracting amounts of glycolic acid and carbon dioxide.

83. A composition consisting essentially of mosquito attracting amounts of glycolic acid, carbon dioxide, and lactic acid.

84. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attractng amounts of lactic acid and butanone.

85. A method for attracting mosquitos comprising exposing an

environment with a composition consisting essentially of mosquito attracting amounts of lactic acid, butanone, and dimethyl disulfide.

86. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid and 2-pentanone.

87. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid and carbon disulfide.

88. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid, carbon disulfide, and carbon dioxide.

89. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid and acetone.

90. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito

attracting amounts of lactic acid, acetone, and carbon dioxide.

91. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid and dimethyl disulfide.

92. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.

93. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of pyruvic acid and acetone.

94. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of glycolic acid and acetone.

95. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of glycolic acid and carbon dioxide.

96. A method for attracting mosquitos comprising exposing an environment with a composition consisting essentially of mosquito attracting amounts of glycolic acid, carbon dioxide, and lactic acid.

97. A composition comprising mosquito attracting amounts of lactic acid, acetone, and carbon dioxide.

98. A composition comprising mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.

99. A method for attracting mosquitos comprising exposing an environment to a composition comprising mosquito attracting amounts of lactic acid, carbon disulfide, and carbon dioxide.

100. A method for attracting mosquitos comprising exposing an environment to a composition comprising mosquito attracting amounts of lactic acid, acetone, and carbon dioxide.

101. A method for attracting mosquitos comprising exposing an environment to a composition comprising mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.